Requirements

We first define the actors and stakeholders relevant to the system and its development.

* Teacher/Tutor – Wants to create exercises practicing the subjects in his syllabus, with attention to different classes and way of progress.
* Teaching Authority – Wants to create a syllabus for teaching the language by the methodology it applies.
* English Learner – the end user, target audience. The person who uses the system to practice the language. Wants to practice the language through exercises and receive feedback.

Teaching Authority

1. Create subjects that comprise the syllabus.
2. Define prerequisites for each subject.
3. Define class system used to categorize student abilities.
4. Allow teachers to add exercises to subjects.

Teacher

1. Create questions in the following formats
   1. Questions with missing words that students need to complete from a given batch of possible answers or by hand.
   2. Words with missing letters that students need to complete from a given batch of possible answers (letters) or by hand.
   3. Sentences that require modification of a part of the sentence as stated in the instructions of the question.
   4. Questions that require an answer from a given batch of possible answers or by hand.
   5. Construction of a sentence from its components given as a batch of options.
   6. Questions that require a student to match a word to its meaning.
   7. Questions that require a student to form a sentence from two given parts.
2. Create complete exercises that incorporate multiple questions of the same type with or without additional shared content, such as a contextual story.
3. Define the allowed or recommended progression of a student throughout questions in a given exercise and/or the exercises themselves.
4. Categorize questions by the subject-matter they practice, an optional topic (such as in the case of practicing vocabulary by *animals*, *colors* or certain scenarios such as *meeting people* and *traveling*).
5. Track progress of students, including amount of mistakes they make, in which subjects and specific exercises.

Game Designer

1. Present exercises through a visually engaging environment.
2. Create a complex reward system that acknowledges players of their progression through different levels of the game (achievements).
3. Have competitive play in online mode, separating player in a given levels to a few groups competing with each other for the win.
4. Define multiple game modes in both online and offline gameplay. These game modes will assume a set of alternate variables settings determining things such as
   1. Winning condition in a game
   2. Interaction between members

Learner

1. Practice ESL through subjects.
2. Progress through subjects as recommended by Teachers
3. Receive **accurate and reliable feedback** regarding mistakes in questions.
4. Communicate with other learners in a group.

UC1

Actor: Teaching Authority (TA)

**Create School:** a TA first creates the objectives (subject-matter/linguistic) used to practice the language. Defines the classes by which he categorizes learners’ proficiency levels. To each objective, TA assigns the appropriate classes where the objective is practiced. TA creates any number of unique syllabuses (a sequence of objectives) each having a target class.

UC2

Actor: Teacher/Tutor aka Exercise Editor

**Create Exercise**: A tutor selects a subject from an existing syllabus (of its TA). Selects the format of the exercise. Enters instructions needed to perform the exercise. Tutor selects a class context to assign to the exercise (from TA defined classes available to the selected objective. Creates new questions in the format of the exercise: for each question, he enters the content and the answers (specific input defined by format).

Alternate Scenarios: Tutor selects an existing exercise and adds questions to a selected class context within the exercise or defines a new class context (if available) to the exercise.

UC2

Actor: English Learner

Stack Holders: Teacher

**Practice Language**: a Learner selects a syllabus. He starts from the most basic class and subject. He enters a new exercise, and begins solving questions. At the end of the exercise, he receives feedback about his submitted answers (whether he was correct or not) and is presented with the correct answer in case he was wrong in a question. If he passed a certain threshold, he is granted access to the next exercise as determined by the syllabus.

UC3

Actor: English Learner

Stack Holders: Teacher, Game Designer

Play New Game Online: a learner selects a subject. He is presented with all instances that are currently running and played by one or more learners. He selects a group with available slots (at least one empty seat) and asks to join. He joins and starts play from the current phase of the game.

UC4

Actor: Teacher

Create New Challenge: a teacher selects an existing subject. Selects the type of challenge to create (missing words, sentence completion, sentence modification etc.).

UC5

Actor: Player

Answer Exercise: Player is presented with questions in exercise. A Player selects an answer. He may select to:

1. Submit the answer
2. Skip to the next question (if possible)
3. Pass it to another team member (possible only once in a round per player)
4. Ask for any number of clues (clues are given incrementally clearer)

UC6

Actor: Content Editor

Create New Missing Content Exercise: User inputs the missing content sentence as one complete sentence with only the static invariant letters and punctuation marks. The system processes the text and splits it to terms. User selects the points in the text where missing content should appear. He defines up to four answers per insertion point. Answers may be